

**1 OCTOBER 1996**



**Maintenance**

**AFMC IMPROVED ITEM REPLACEMENT  
PROGRAM (IIRP) GUIDANCE AND  
PROCEDURES**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction applies to HQ AFMC, the air logistics centers (ALC), product centers, and other AFMC operational locations as necessary. Operating commands should be familiar with the requirements and budgeting processes outlined in this instruction. This instruction implements AFD 21-1, *Managing Aerospace Equipment Maintenance*. It explains how to prepare, validate, and approve a candidate for the IIRP. Users of this instruction should also be familiar with the policy and guidance contained in DoD Instruction 5000-2, *Defense Acquisition Management Policies and Procedures*, and AFI 65-601, Volume 1, *Budget Guidance and Procedures*. This instruction requires the collection and maintenance of information protected by the Privacy Act of 1974. The authority to collect and maintain the data prescribed in this instruction is 10 U.S.C. 8013. Privacy Act statements required by AFD 21-1 are in the body of each form or document, or in a separate statement accompanying each document.

**1. IIRP Goal.** IIRP offers the Air Force and AFMC a unique manner to correct Reliability and Maintainability (R&M) deficiencies by utilizing the most economical means of installing an improved shop replaceable unit (SRU) or line replaceable unit (LRU).

**2. IIRP Objective.** IIRP was created in 1991 by merging the Preferred Spares and 100 Percent Replacement Programs. The primary objective of IIRP is to provide a means for rapid introduction, promoting forced attrition rather than normal attrition, of an improved Defense Business Operations Fund (DBOF) Repairable Support Division (RSD) managed item into an Air Force weapon and supply system. The more reliable, more maintainable DBOF repairable item shall be form, fit, and functionally compliant with the deficient item it replaces.

**3. IIRP Process.** The IIRP process is tightly aligned with the Planning, Programming, and Budgeting System (PPBS) process. Figures 1, 2, and 3 depict the overall engineering and budgeting process steps which accompany each phase of "the R&M improvement effort;" beginning with the identification of an

R&M deficiency and concluding with the installation of the IIRP candidate. The IIRP process only relates to the procurement of the improved DBOF repairable item. The DBOF is used to procure the improved items for the Supply Maintenance Business Area (SMBA). The operating commands desiring the improved item must then "buy" the assets from the SMBA, using their Operation and Maintenance (O&M) funds. Depot maintenance funds will be required if the installation is going to take place during programmed depot maintenance (PDM). Consequently, both the single manager and operating commands must coordinate their budgetary inputs in order to properly align all procurement and installation activities. IIRP funding cannot be used for nonrecurring engineering costs, engineering change proposal development, and support equipment needs.

**3.1. Engineering.** The design, development, test, and prototype evaluation tasks, which may lead to an IIRP candidate, are conducted independently of the IIRP phase of the R&M effort. According to AFI 65-601, volume 1: *Use DBOF (COD Engineering) to fund development, production, and maintenance engineering services that support an operational commodity item managed under the DBOF SMBA. Use DBOF (COD Engineering) for reverse engineering an item to improve supportability or competition, or, to improve the R&M of the item itself.* The Engineering Funding Decision Table, from the 15 November 1994 white paper on Technology Insertion in a Fielded System, is shown as figure 4. The table indicates the proper funds account to use, based on the nature of the task and the phase of life cycle acquisition.

**3.2. Preapproval Process.** All proposed IIRP candidates will be reviewed and approved by HQ AFMC and the operating commands prior to actual preparation of a formal IIRP package. The process requires the program manager to complete AFMC Form 562, **Improved Item Replacement Program (IIRP) Operating Command(s) and HQ AFMC Preapproval**. The program manager will then submit the form to HQ AFMC/LGI and the operating commands for review and approval. The operating commands will send their comments/concurrences to HQ AFMC/LGI. HQ AFMC/LGI will review AFMC Form 562 with HQ AFMC/FMR/FMC/ENP for IIRP concurrence. HQ AFMC/LGI will officially notify the program manager as to whether or not the candidate meets IIRP criteria and, if approved, a formal package will be requested.

**3.3. IIRP Reviewing Forum.** The annual Logistics Supportability Review (LSR) may be used to assist with the HQ AFMC review and preapproval exercise outlined in paragraph 3.2. The LSRs are conducted across the ALCs for each weapon system. HQ AFMC/LGI will notify all applicable operating command IIRP points of contact (POC) that an IIRP candidate is on the agenda for review. With HQ AFMC, operating commands, and single manager organizations present, these meetings are ideally suited to addressing all programmatic issues of the IIRP candidates. Both proposed IIRP candidates and formal IIRP packages will be reviewed as necessary. Actual voting on the proposed candidates will only be conducted if the appropriate organizations are represented at the LSRs. These meetings may also be used to review any out-of-cycle IIRP submissions for the Apportionment Year (AY), Budget Year (BY), and Extended Year (EY).

#### **4. Usage and Limitations.** IIRP candidates must meet specific criteria.

4.1. By definition, an IIRP candidate:

4.1.1. Must represent an R&M improvement over the existing item intended for replacement -- measure of merit such as mean time between maintenance (MTBM) shall be used to quantify R&M benefits.

4.1.2. As an R&M initiative, implementation of the new candidate must show a positive return on investment (ROI) over the predicted remaining service life of the weapon system or systems which will utilize the candidate.

4.1.3. Must be form, fit, and functionally compliant with the item intended for replacement. R&M improvements typically result in added performance or capability enhancements; capability enhancements, as a "by-product" to the R&M initiative, are within scope of IIRP.

4.1.4. Must be an RSD asset.

4.2. If operational requirements mandate immediate implementation of an IIRP candidate, thereby promoting forced generation rather than normal or forced attrition, the issue of "positive ROI" surfaces. The candidate must still meet the basic IIRP criteria, including forecasting a positive ROI if implemented through normal or forced attrition. A positive ROI is defined as being greater than 1:1 over the forecasted service life of the weapon system. If the ROI criterion now cannot be met because of the decision to dispose of serviceable DBOF items, then the IIRP candidate may still be approved by HQ AFMC.

4.3. IIRP candidates must comply with the Competition in Contracting Act and the Federal Acquisition Regulation (FAR) Part 6. Any IIRP acquisition using other than full and open competition must comply with the requirements for a Justification Review Document and Justification and Approval, as set forth in FAR Part 6 and its supplements.

4.4. Installation of IIRP candidates must be performed according to the Source Maintenance Recoverability Code. Furthermore, all IIRP candidates shall not require depot assistance or special depot tooling above and beyond normal installation requirements for installation. The replacement of installed items shall not require more than 8 clock hours or 25 man-hours for installation or associated minor fit rework over and above normal installation or rework time.

4.5. RSD buy obligation authority (OA) may be used to purchase applicable technical data needed for implementation of the IIRP candidate. This includes technical orders, engineering drawings, job guides, etc.

4.6. RSD buy OA shall not be used to acquire or modify support equipment nor for maintenance engineering costs. The IIRP shall not be used to fund the development or the design of new items of supply.

4.7. The "IIRP Logic Tree" in figure 5 shall be used by AFMC program managers to verify the eligibility of a proposed candidate item.

4.7.1. The flowchart in figure 5 may also be used to determine applicable installation strategy and to ensure that all pertinent IIRP issues have been addressed by the program manager.

**5. Responsibilities.** IIRP candidates require coordination from a variety of Air Force organizations. To maintain the integrity of the program, the organizational responsibilities have been delineated in this section. All formal IIRP packages shall be prepared by the ALC single manager responsible for management of the improved item.

**5.1. Single Manager.** The designated IIRP program manager, working for the single manager, is responsible for generating a quality IIRP package for review and approval at the appropriate levels of management. This review includes all appropriate single managers (system program director, material group manager, product group manager) and operating commands. AFMC Form 563, **Operating**

**Command(s) Improved Item Replacement Program (IIRP) Formal Package Approval**, is to be signed by the operating commands, indicating their commitment to the IIRP strategies for implementing the improved item. Inputs from the item manager, engineer, equipment specialist, contracting officer, affected operating commands, and the financial management community may be required for this effort. If the installation strategy affects PDM, the single manager is ultimately responsible for coordinating depot maintenance impacts and adjusting Depot Maintenance Business Area (DMBA) rates with the Maintenance Requirements Review Board and DMBA personnel.

**5.1.1. Interactions with Operating Commands.** The single manager shall work with the affected operating commands, and their designated IIRP POC, to identify potential R&M improvement areas and candidates. As stated in paragraph 5, the ALC organization is solely responsible for creating the formal IIRP package. Operating command representatives are responsible for obtaining the O&M funding necessary to procure the proposed IIRP assets from AFMC. O&M budgetary needs must align properly with the RSD OA needs of the IIRP program manager. The single manager shall work with the operating command representatives to track and measure the economical benefits associated with actual implementation of the candidate.

**5.2. Air Logistics Centers (ALC).** The single manager shall utilize the financial management community (FM) resident at the ALC during the preparation of the IIRP package. The FM community has been trained on the IIRP package requirements, and is well prepared to support specific documentation needs of the IIRP program manager. It is incumbent on the IIRP program manager to use this local expertise in the generation of the package.

**5.3. HQ AFMC.** HQ AFMC/LGI/FMR/FMC/ENP each have an office of primary responsibility for the IIRP program. These personnel are responsible for reviewing/approving all packages, educating the Air Force on IIRP policy and procedures, and assisting the single managers/ALCs with budgeting for the IIRP candidates. HQ AFMC, in coordination with the affected operating commands, will also be responsible for defining a candidate prioritization strategy, as necessary.

5.3.1. HQ AFMC/LGI shall conduct semiannual reviews of all proposed, approved, and installed IIRP candidates and their sustainment posture.

**5.4. HQ USAF.** HQ USAF/LGS is responsible for addressing all "Additive Requirements" for AFMC--of which IIRP is one. HQ USAF/LGS reviews/approves all IIRP budgetary submissions, reviews/approves appropriate packages, and assists HQ AFMC with IIRP policy and procedures.

5.4.1. HQ USAF/LGS validates IIRP adjustments to operating command cost per flying hour (CPFH) factors. Operating commands will submit a Program Objective Memorandum (POM) for the O&M funds required to accomplish the IIRP. Once approved and funded, operating commands will include the necessary O&M dollar increase/decrease as an adjustment to their CPFH factors.

5.4.2. HQ USAF/LGS verifies that the customer accounts and the RSD OA are properly aligned. They also verify that DMBA rates are adjusted when necessary.

**6. Documentation Requirements.** Each IIRP package shall contain specific pieces of documentation, encompassing the information detailed below:

**6.1. Introduction/Background.** This section is used to introduce the reviewer to the IIRP candidate. It shall address the following:

6.1.1. Identification of the National Stock Number (NSN) and nomenclature for both the existing reparable item requiring improvement and the forecasted item of improvement.

6.1.2. The dollar value and quantity of the projected buy and repair requirements for the current year and next 2 years for the deficient item. The dollar value of the projected buy and repair requirements for the improved item for the first 3 years. Include the exchange price, repair price, and forecasted acquisition cost for the deficient item and the improved item.

6.1.3. The R&M deficiency which initiated the task. This includes MTBM data, maintenance problems, parts obsolescence issues, diminishing manufacturing sources impacts, etc. If applicable, include a discussion of any maintenance revisions implemented to maintain full mission capability with the existing item.

6.1.4. A synopsis on the R&M benefits to be realized with this candidate, including ROI information.

6.1.5. Any potentially adverse impacts on the improved item's interface with other items within the system it operates. For instance, the IIRP program manager shall identify if a warranty on the improved item risks negation from another item's reliability or performance deficiency. If the possibility exists, this "system" information must be presented in the background section of the formal IIRP package.

6.1.6. A status of the engineering activity associated with the candidate. This includes identifying the acquisition phase: concept exploration, engineering and manufacturing development, etc. Forecasted milestones for completion of all engineering actions are required.

6.1.7. The estimated timeframe and proposed strategy for the procurement and installation of the improved item. If the procurement strategy is to utilize both sole source and competitive buy actions, then any potential time "gaps" between the two procurement actions must be identified in this section.

6.1.8. The proposed timeframe and strategy for disposal of the deficient item.

6.1.9. The weapon system or systems affected and the projected fleet size in the outyears--for installation considerations.

6.1.10. The projected service life of the affected weapon system or systems.

6.1.11. Weapon system or systems/mission impact if the IIRP candidate cannot be procured and installed.

6.1.12. Identification of OPRs. This includes the IIRP program manager, engineer, equipment specialist, item manager, FM (budgeting, funding, requirements, and cost analysts), contracting officer, SMs, and operating command representatives. AFMC Form 564, **AFMC IIRP Formal Package Approval**, shall also identify these individuals.

**6.2. Technical Description.** This section is used to provide a brief description of the actual R&M improvements made to the DBOF managed item. If any capability enhancements are derived as a side effect of the R&M improvement, they shall be recorded in this section.

**6.3. Requirements Definition.** This section is used to provide details concerning the quantity of installs and spares, both peacetime operating stock (POS) and readiness spares packages (RSP), required for implementation of the IIRP candidate. Install quantity shall be calculated by multiplying

the quantity per aircraft by the total aircraft inventory authorized in the program authority document. The spares projections shall be based on the estimated failure rate and the phased future program of the improved item, not the deficient item. The following categories of requirements shall be considered in determining the spares requirement: pipeline, additives, condemnations, and safety levels. POS shall be made according to AFMCMAN 23-1, *Recoverable Consumption Item Requirements System (D041 Users Manual)*. RSP shall be made according to AFM 67-1, *USAF Supply Manual*, Volume 1, Part One, Chapter 14. These requirements shall reflect the expected improvement in reliability.

**6.4. Attachments.** The following list of attachments are required in an IIRP package.

**6.4.1. Economic Analysis.** The economic analysis will address the methodology for implementing the new item into the weapon and supply systems. It will address the installation strategy, impact on repair budgets, support equipment impacts, bit and piece part support, and the spares requirements.

6.4.1.1. AFMAN 65-506, *Economic Analysis*, may be used as a reference for generating the IIRP economic analysis.

6.4.1.2. In cases of parts obsolescence or diminished manufacturing capability, an economic analysis is still required. Estimates shall be generated for continued repair of the old item and/or procurement of the old item from another vendor source.

**6.4.2. D041 Requirements Computation.** Include the latest D041 computation used to project the requirements for POS and RSP. If the item is not currently computing in D041, a like item possessing a similar application, projected usage rates, and lead time may be used. File maintenance changes to the computation shall be documented and provided as backup information.

**6.4.3. Approval Forms.** The IIRP candidacy information in AFMC Forms 563 and 564 is generated by the IIRP program manager and submitted as attachments with the IIRP formal package. The IIRP formal packages are submitted simultaneously to the operating command customers and HQ AFMC/LGI.

**6.4.3.1. AFMC Form 563, Operating Commands Improved Item Replacement Program (IIRP) Formal Package Approval.** This form shall be used by the IIRP program manager to ensure all operating command customers have reviewed and approved the IIRP formal package.

6.4.3.1.1. All affected operating commands shall submit their review and approval of the formal IIRP package via AFMC Form 563. Operating command approval indicates agreement with the intent of the program and responsibility for budgeting the necessary O&M funds needed to procure the improved items. The lead command concept does not apply in IIRP matters because each command's O&M funding is impacted. All applicable operating commands shall review the proposed IIRP candidate, regardless of intention to implement the R&M improvement. Coordination on the formal IIRP package constitutes operating command agreement to POM for any additional O&M funds required to accomplish the IIRP during the next POM cycle, including any adjustments to the depot purchased equipment maintenance.

**6.4.3.2. AFMC Form 564, IIRP Formal Package Approval.** This form shall be included with the submission of the IIRP formal package. The coordination of the single managers, sin-

gle manager staff, and local ALC/FM representatives shall be reflected on this form. HQ AFMC will then use this form to reflect its review and approval of the package. HQ AFMC will not coordinate on this form until HQ AFMC/LGI receives the AFMC Form 563 from all affected operating command customers. If necessary, HQ AFMC/LGI shall be responsible for obtaining higher headquarters approval on this form.

**6.4.4. Technical Drawings.** All pertinent technical drawings, illustrating the hardware and software changes between the old and new items, will be included as an attachment. The IIRP program manager shall identify the ALC which manages the technical data for the improved item, if it is different than the ALC responsible for procuring the assets.

**7. Requirements Review Process.** Each IIRP package is reviewed and approved at specific levels, depending on the dollar threshold of the program. The threshold is actually addressed in two manners-annual funding needed and overall program cost. The determination of the highest level of review is established by having one or both criteria being met. The criteria for review/approval of the IIRP packages is depicted in figure 6. For example, a package calling for \$10 million in annual RSD OA, but having a total program cost of \$55 million shall require review/approval according to Category 2.

7.1. The ALC organization which builds an IIRP package shall also be responsible for reviewing all appropriate technical, financial, and contracting issues pertaining to the IIRP candidate. The appropriate ALC organizations shall reflect their approval of the IIRP formal package by coordinating on AFMC Form 564.

7.1.1. The formal IIRP package shall be submitted simultaneously for review to HQ AFMC/LGI and all applicable operating commands. Operating command approval/disapproval letter and comments to the formal IIRP package shall be forwarded to HQ AFMC/LGI. All review comments shall then be forwarded to the IIRP program manager for implementation.

7.2. The IIRP requirement shall comply with paragraph 6.3 and be validated by all reviewing organizations.

7.3. Technical feasibility and risk shall be assessed by the appropriate engineering organization. IIRP allows for state-of-the-art technology insertion, however, such efforts must be risk-tolerant for the operating commands. Generally, IIRP candidates utilize mature technologies to improve item R&M features.

7.4. The ALC review of the proposed IIRP package shall consider propriety of funding issues, program executability, and the overall program strategy.

7.5. Implementation of the Acquisition Strategy Planning (ASP) Process.

7.5.1. A standing ASP shall be formed according to SAF/AQ Memo 95A-009, 7 November 1995. Standing ASPs are formed to provide consistent counsel to program managers early in the development of their acquisition strategy.

**7.6. Formal Review Board.** HQ AFMC/LG reserves the right to request and sponsor a formal review of an IIRP candidate, during any phase of its submission and/or implementation. Representatives from AFMC and operating commands "LG" communities will constitute voting membership during the formal review board. HQ AFMC/LGI will chair the formal review board process, with each operating command representative and HQ AFMC/LG receiving one vote apiece. The board may

vote on IIRP candidacy, procurement strategy, and installation strategy. In all cases, the IIRP program manager will be responsible for presenting the relevant issues to the board for consideration.

**7.7. IIRP Candidate Prioritization Exercise.** If the RSD Buy OA is decreased for a specific year, the weapon systems scheduled to receive OA, for IIRP candidates, for that year may also be subject to a similar decrease. If RSD Buy OA is severely curtailed for a specific year, then HQ AFMC/LG/FM, in coordination with the operating commands, may elect to conduct a prioritization exercise. This will be used to determine which candidates receive what amounts of RSD Buy OA. Factors such as safety, mission grounding, procurement continuation from previous years, and ROI will be used to determine the rank order for all submissions.

**8. Funding Process.** The funding for stock fund engineering services and replenishment spares is tied to the PPBS process. These funding requirements are budgeted lead time away--for example, Fiscal Year (FY) 96 funding is requested in FY94.

8.1. Funding for the IIRP candidate is a three-step process.

8.1.1. The engineering requirements for SMBA items are funded by the cost of operations division (COD) of SMBA once the engineering task is identified to a specific stock fund item.

8.1.2. RSD Buy OA funds the procurement of assets for the installs and spares, including initial technical data requirements. RSD Buy OA does not fund modification requirements. BP1100 dollars normally fund modification efforts.

8.1.2.1. To ensure the IIRP requirements are included in the budget, completed packages are submitted in March along with the September requirements data (i.e., in March 1996 IIRP funding requests for FY98 are submitted). These packages are reviewed and approved in time for inclusion with the March requirements data, in the August budget submission.

8.1.2.2. RSD Buy OA for approved IIRP candidates is identified in the annual operating budget documents. Authority to obligate stock fund OA comes from the S&IO MEB. The level of funding will dictate how much OA is available to support the IIRP. Approval of the program does not constitute authority to obligate OA.

8.1.3. The operating command requires O&M funding to procure the assets from base supply. There is no free issue. When additional O&M funds are required to accomplish the IIRP, operating commands POM for the costs during the next cycle and when approved, adjust their CPFH factors. If installation of the improved item is accomplished during PDM, the DMBA rates may need to be adjusted. If this happens, customer O&M funding may be impacted.

8.2. Failure to budget lead time away for IIRP requirements compromises the funding support to budgeted Air Force requirements.

**9. Procurement and Installation Strategy.** IIRP candidates may be installed in weapon systems in one of three manners: normal attrition, forced attrition, and forced generation. The installation strategy of the IIRP program manager will impact the procurement strategy of the improved item candidate. The proposed plan for implementing the improved item will be reflected on AFMC Forms 563 and 564 for each affected operating command.

9.1. The IIRP encourages forced attrition of the improved items--in order to maximize the economic benefits of the candidates. A normal attrition strategy is defined as: *the act of removing a condemned*



*asset, according to scheduled maintenance, which has no remaining life and cannot be repaired, and replacing it with an improved item--only after exhausting the old item from the supply system.* In cases of item improvement, the item manager will typically procure the new item according to standard item management practices using RSD Buy OA. Use of IIRP funding for normal attrition replenishment practices is typically unnecessary.

9.2. Forced attrition involves purging the existing supply of the old item. It's defined as *the act of removing an unserviceable asset, according to scheduled maintenance, which has remaining life and replacing it with an improved item--optioning not to repair the old item.* This strategy is recommended if implementation of the improved item is economically advantageous to the Air Force and/or parts obsolescence, combined with a lack of repair capability for the old item, deems the action necessary.

9.3. By design, the IIRP does not encourage forced generation practices, defined as *the act of removing a serviceable asset, according to unscheduled maintenance, with remaining life and replacing it with an improved item.* However, if no repair capability exists for the old item and the rapid implementation is economically advantageous to the Air Force, the IIRP program manager may request approval for forced generation in the IIRP package. According to paragraph 4.2, forced generation of an IIRP candidate may be approved by HQ AFMC only when operational requirements mandate immediate implementation.

**10. IIRP Effectiveness Indicators.** In support of current and future budget submissions for IIRP and DBOF COD engineering funds, AFMC shall track and measure the effectiveness of technical efforts aimed at improving weapon system R&M. Each IIRP program manager shall track all sustainment costs and reliability data for the installed IIRP candidates. Data pertaining to the economic benefits, both forecasted and realized, will be provided annually to HQ AFMC/LGI and operating command IIRP representatives.

10.1. Sustainment data for an IIRP candidate shall be tracked by the IIRP program manager. In turn, the single manager shall be responsible for providing this information to HQ AFMC/LGI and operating command customers according to AFMC Form 565, **Improved Item Replacement Program Effectiveness Indicators**. The IIRP program manager shall be responsible for updating the information and forwarding the form to HQ AFMC/LGI and all operating command customers in December of each year. Data will be recorded until the reliability and sustainment costs are recognized by the IIRP program manager as being stable. The reporting requirement in this paragraph is exempt from licensing according to paragraph 2.11.12 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

**11. Training.** The ALC/FM organizations are responsible for local implementation of the policies and processes delineated in this instruction. Program managers wishing to use the IIRP process should be familiar with the programmatic and financial practices specified in Figure 2.

Figure 1. Improved Item Replacement Program Process.

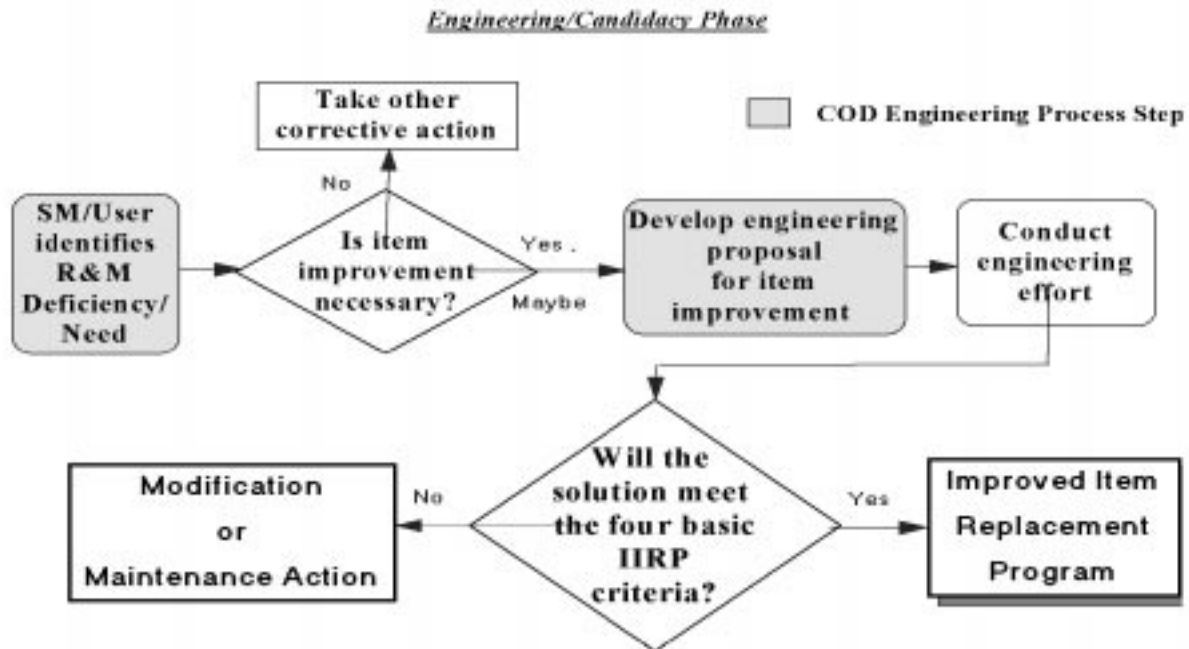


Figure 2. Budgeting/Funding Phase.

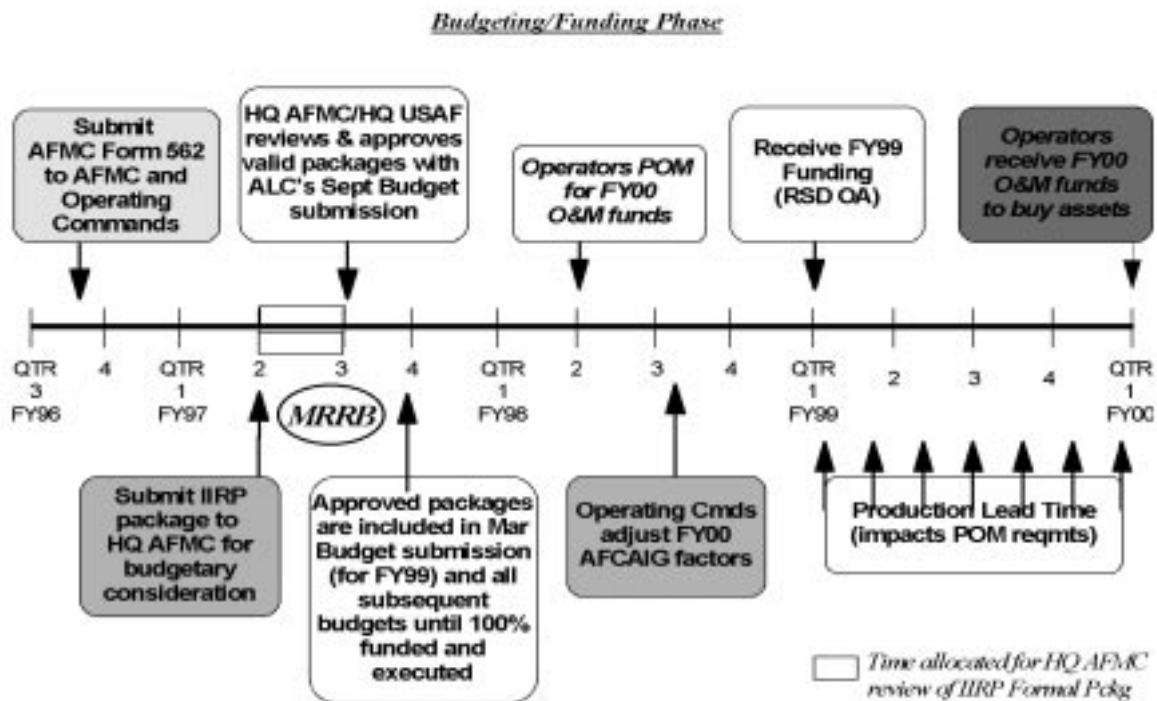


Figure 3. IIRP Budget Activities.

	MAR 97 COMP	SEP 97 COMP	MAR 98 COMP	SEP 98 COMP
<b>S</b>	Data as of: FY97/Qtr2 31 Mar 97	Data as of: FY97/Qtr 4 30 Sep 97	Data as of: FY98/Qtr2 31 Mar 98	Data as of: FY98/Qtr 4 31 Sep 98
<b>U</b>	Projections for:	Projections for:	Projections for:	Projections for:
<b>P</b>	FY97 (AY*) 97- 30 Sep 97)	FY98 (AY) (1 Oct 97- 30 Sep 98)	FY98 (AY*) (1 Apr 98- 30 Sep 98)	FY99 (AY) (1 Oct 98- 30 Sep 99)
<b>P</b>				
<b>L</b>	FY98 (BY) (1 Oct 97- 30 Sep 98)	FY99 (BY) (1 Oct 98-30 Sep 99)	FY99 (BY) (1 Oct 98- 30 Sep 99)	FY00 (BY) (1 Oct 99- 30 Sep 00)
<b>Y</b>	FY99 (EY) (1 Oct 98- 30 Sep 99)	FY00 (EY) (1 Oct 99- 30 Sep 00)	FY00 (EY) (1 Oct 99- 30 Sep 00)	FY01 (EY) (1 Oct 00- 30 Sep 01)
			FY01 (EY+1)(1Oct 00- -30Sep 01)	
<b>M</b>	Receive funding require- ments in 4th quarter of FY97 (Aug 1997).	Receive revised funding requirements for FY98 in 2nd quarter of FY98 (Mar 1998).	Receive funding require- ments in 4th quarter of FY98 (Aug 1998).	Receive revised funding rqmts for FY99 in 2nd quar- ter of FY99 Mar 1999).
<b>G</b>				
<b>T</b>				
<b>B</b>	Requesting funding for FY99 (EY).	Midyear pdate/adjust- ment to FY94 funding.	Requesting funding for FY00 (EY).	Midyear update/adjustment to FY99 funding.
<b>U</b>				
<b>S</b>	Restate FY98 funding re- quest. The budget request already went forward in Aug 1996.		Restate FY99 funding re- quest. The budget request already went forward in Aug 1997.	
<b>I</b>				
<b>N</b>			First look at FY01 (EY + 1)	
<b>E</b>				
<b>S</b>	FY98/99 ABESFY95 PB	30 Sep data not current- ly used for budget sub- mission.	FY00/01 DBRFY00/01 PB	30 Sep data not currently used for budget submission.
<b>A</b>				
<b>R</b>	FY99 surcharge set with approval of FY99 PB.		FY00 surcharge set with ap- proval of FY00/01 PB.	
<b>E</b>				
<b>A</b>		Receive FY98 funding based on FY98 BES sub- mitted in Aug 1996.		Receive FY99 funding based on FY99 ABES submitted in Aug 1997.

Figure 3. Continued.

	IIRPs	IIRPs	IIRPs	IIRPs
<b>S M B A</b>	Approved IIRPs included in FY99 Budget.		Approved IIRPs included in FY00 Budget.	
	IIRPs that are included in the FY99 budget were NOT submitted in Aug 1997!! These IIRP packages should have been submitted in Oct 1996.	IIRP package submitted for approval and inclusion in the FY00/01 DBR.	IIRPs that are included in the FY00/01 DBR were NOT submitted in Aug 1998!! These IIRP packages should have been submitted in Oct 1997.	IIRP package submitted for approval and inclusion in the FY01 BES.
	DEPOT	MAINTENANCE	BUSINESS	AREA (DMBA)
	If PDM is used to install the improved item, there may be an impact to the DMBA rates. The increase/decrease needs to be budgeted for.	If PDM is used to install the improved item, there may be an impact to the DMBA rates. The increase/decrease needs to be budgeted for.	If PDM is used to install the improved item, there may be an impact to the DMBA rates. The increase/decrease needs to be budgeted for.	If PDM is used to install the improved item, there may be an impact to the DMBA rates. The increase/decrease needs to be budgeted for.
	O&M FUNDING	O&M FUNDING	O&M FUNDING	O&M FUNDING
	Command using FY97 funding to buy assets from supply. The command funding was requested in the FY95 POM. The assets were bought and put into supply with FY96 stock fund OA.	N/A	Command using FY98 funding to buy assets from supply. The command funding was requested in the FY96 POM. The assets were bought and put into supply with FY97 stock fund OA.	N/A
	Command requesting FY00 funds to buy assets lead time away (assumes 1 year production lead-time). ALC requesting stock fund OA in FY99 to buy assets so they are available in FY00.	N/A	Command requesting FY01 funds to buy assets lead time away (assumes 1 year production lead time). ALC requesting stock fund OA in FY00 to buy assets so they are available in FY01.	N/A

**ABES:** Amended Budget Estimate Submission

**DBR:** Defense Budget Request. Budget estimate submission (BES) same as DBR.

**EY + 1:** Request 4 years of data for DBR.

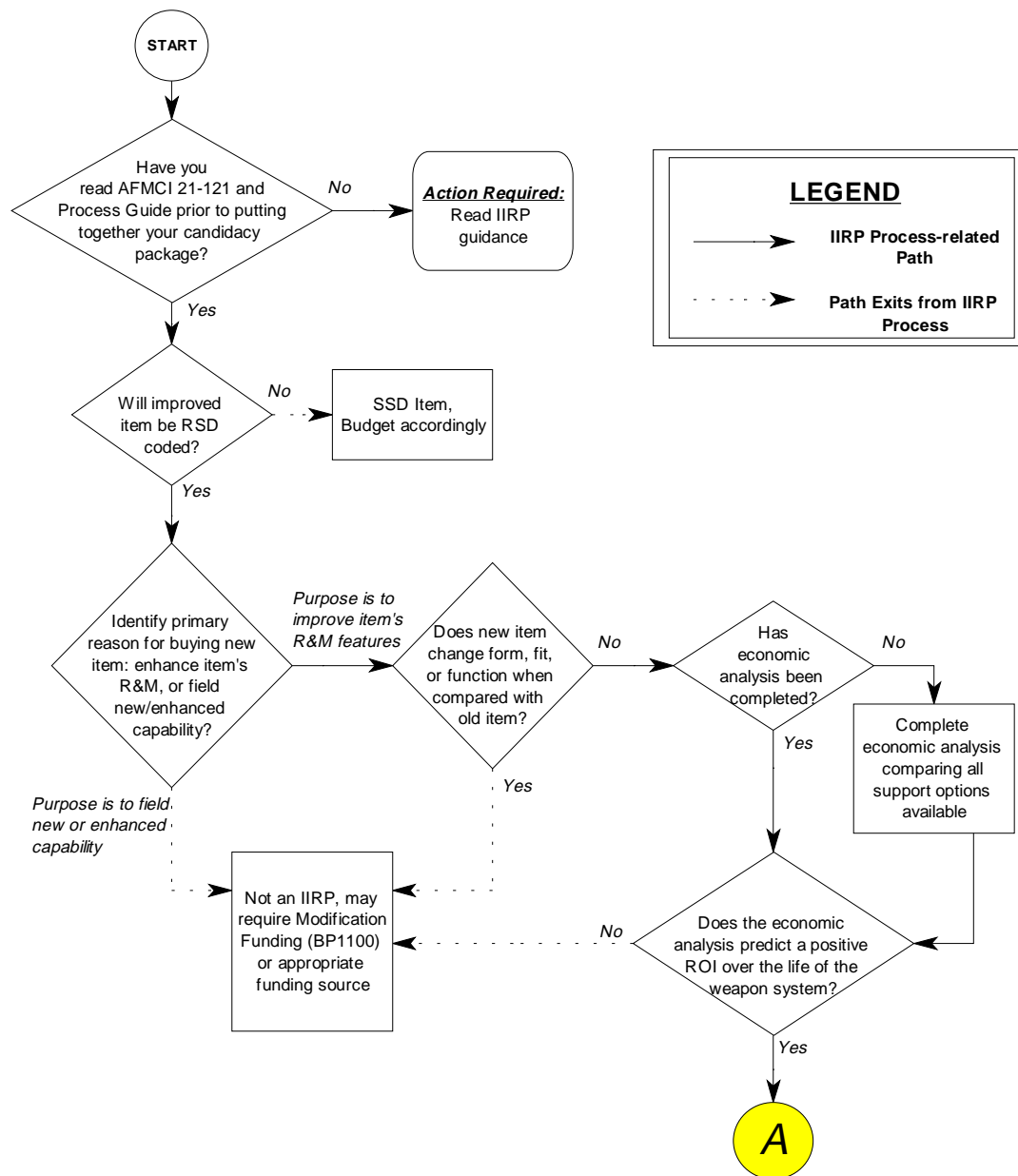
**PB:** President's Budget -- submitted every year.

\* 6 months of AY left.

Figure 4. Engineering Funding Decision Table.

	RDT&E	3010/3020/3080	O&M	DBOF
<b>Are we engineering a weapon system?</b>				
What phase of the acquisition cycle are we in?				
Dem/Val? (Milestone I & II)	X			
Engineering&Manufacturing Development? (Milestone II)	X			
Production & Deployment? (Milestone III)				
Achieving/improving performance?	X			
Correcting deficiency in approved production baseline?		X		
Operations & Support? (Milestone IV)				
Review/assess/define/resolve deficiencies in post production operational service?			X	
Redesign a weapon system or an aspect of its performance envelope?	X			
Study needed to determine if an ECP/ECO should proceed to a mod?				
-- If mod is a reliability/maintainability/supportability effort?			X	
-- If mod is a development effort?	X			
Engineering required to integrate or install Group B items?		X		
<b>Are we engineering a non-DBOF subsystem, equipment or other major end items?</b>				
Refer to weapon system				
<b>Are we engineering a stocklisted item?</b>				
Is it an RSD/SSD item?				
What phase of the acquisition cycle are we in?				
Dem/Val, EMD and Production & Deployment? Refer to weapon system	X	X		
Air Force owned RSD/SSD operational asset (i.e., Operations & Support Phase)?				
-- Development/production/maintenance engineering of the operational item only?				X
-- Engineering of the operational item required as the result of a weapon system production or modification?		X		
Is item an engine component?	X			
Note: If we are engineering a whole engine, refer to weapon system				
If a non-RSD/SSD item and not an engine component? Refer to weapon system				
<b>Does engineering support the Depot Maint Business Area?</b>				X

Figure 5. IIRP Logic Tree.



**Attrition:** Replace unserviceable item (that is to be condemned) with a serviceable one (*IIRP not normally needed*)

**Forced Attrition:** Replace (do not repair) unserviceable item with an improved serviceable item (*IIRP typically applies*)

**Forced Generation:** Replace serviceable item with better serviceable item (IAW unscheduled maintenance) (*IIRP rarely applies*)

Figure 5. Continued.

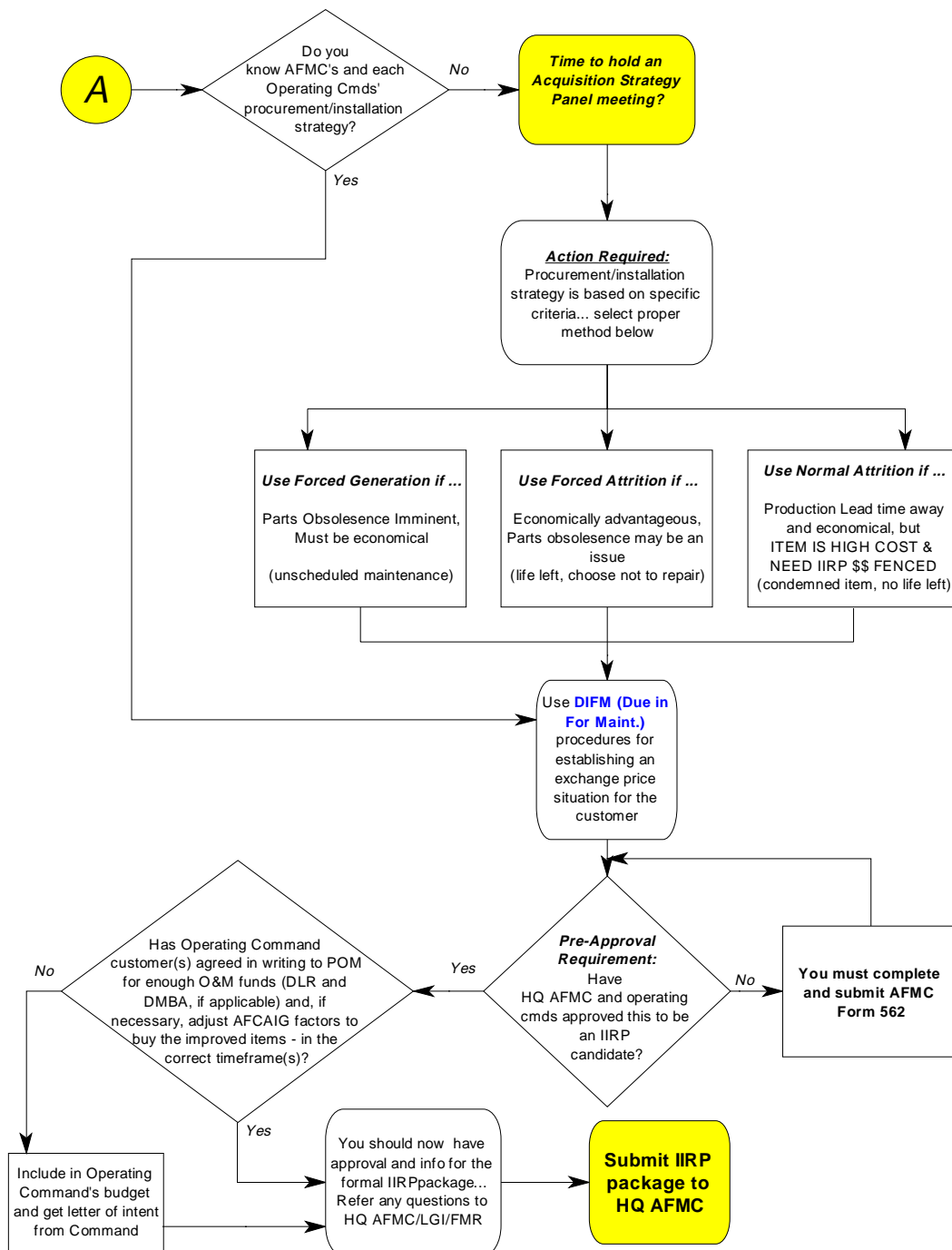


Figure 6. IIRP Review/Approval Criteria Table.

Category	Dollar Value	Required Coordination (*)	Program Approval Level (**)	OA Approval
<b>1</b>	< \$15M/yr or < \$50M total	Prod Directorate, FM, Single Manager(s)	HQ AFMC/LGI (OPR) /ENP/FMR/FMC (OCR)	S&IO MEB
<b>2</b>	< \$25M/yr or < \$100M total	Prod Directorate, FM, SM, ALC/CC	HQ AFMC/LG (OPR) /EN/FM (OCR)	S&IO MEB
<b>3</b>	< \$50M/yr or < \$250M total	Prod Dir, FM, ALC/CC, SM, HQ AFMC/FM/EN/LG	HQ USAF/LGS (OPR) /LGM	S&IO MEB
<b>4</b>	> \$50M/yr or > \$250M total	Prod Dir, FM, ALC/CC, SM, HQ AFMC, HQ USAF	Air Force Council LG (OPR)	S&IO MEB

(\*) includes Contracting Officer(s) at ALC

(\*\*) includes coordination with appropriate HQ AFMC/DR OPR

### 13. Forms Prescribed. AFMC Forms 562, 563, 564, 565.

THOMAS W. BATTERMAN, Deputy Director  
Directorate of Logistics



**Attachment 1****DEFINITIONS**

**Attrition.** Action describing the replacement of an unserviceable item (beyond repair, condemned) with a new serviceable item.

**Condemned Item.** When a reparable item can no longer be repaired to ensure airworthiness, it is condemned. Condemning an item typically results in procuring another reparable item to replace it.

**DO41 Computation.** The Recoverable Consumption Item Requirements Computation (D041) has been designed to support the requirements function. The system operates on an AMDAHL computer at Tinker Data Service Center Tinker AFB, Oklahoma, with segments run at each ALC and HQ AFMC. The D041 system:

Computes spare parts requirement for recoverable (XD1 and XD2) items by interchangeability and substitutability subgroups.

Does the routine clerical, mathematical, and statistical workload involved in computing recoverable item requirements.

Forecasts gross and net requirements using past and future programs, usage history, and asset information maintained within this system.

Produces reports for management evaluation and action.

Produces information for other systems.

**Economic Analysis.** An economic analysis systematically examines costs, benefits and risks of alternatives. It aids the judgment of a decision maker and reduces the chance of omission or personal bias.

**Forced Attrition.** Action describing the replacement of an unserviceable item (item capable of being repaired, but opting not to) with a new serviceable item.

**Forced Generation.** Action describing the replacement of a serviceable item with a better serviceable item, according to unscheduled maintenance.

**Form, Fit, and Function.** The physical and functional characteristics of an end item, but not the characteristics of any of the item's components. By the strictest of definitions, a preferred spare has a different configuration than the item it replaces. For purposes of this instruction, if the improved item is "form, fit, and functionally compliant" with the old item, then the "configurations" comprising the physical and functional characteristics of the two items are deemed similar.

**Maintainability.** The ability of an item to be retained in or restored to specified condition when maintenance is performed by personnel having specified skill levels, using prescribed procedures and resources, at each prescribed level of maintenance and repair.

**Mean Time Between Maintenance.** Measure of item's logistics reliability. Use MTBM to measure the average life units between maintenance actions, including scheduled and unscheduled events. Select an appropriate MTBM parameter based on operating command requirements. Current and planned information systems permit tracking of standard MTBM parameters, such as:

- MTBM (inherent malfunctions)
- MTBM (Preventive maintenance)
- MTBM (induced malfunctions)
- MTBR (mean time between removal for cause)

- MTBM (no-defect events)
- MTBD (mean time between demands)
- MTBM (total corrective events)

**Modification.** A "modification" is a change to a system (whether for safety, to correct a deficiency, or to improve program performance) that is still being produced. An "upgrade" is a change to a system (whether for safety, to correct a deficiency, or to improve program performance) that is out of production. A "major modification" to a program is defined as a modification that in and of itself meets the criteria of acquisition category I or II or is designated as such by the milestone decision authority. Major modifications require a Milestone IV decision unless the decision to modify results from one of the alternatives considered as part of the milestone I decision process. Upgrades are part of the milestone 0 decision process.

**National Stock Number.** Consists of an applicable four-digit class code number (NSN) plus the nine-digit national item identification number.

**Obligation Authority.** For DBOF business areas, such as supply operations, authorized to incur costs while anticipating customer orders, receipt of an operating budget authority allows you to incur costs up to the amount earned based on the actual workload. The SMBA Operating Budget Authority provides OA limitations based on SMBA estimated sales. The OA limitation gives AFMC the authority to incur obligations and expenses for operating facilities, purchasing of materiel, etc., prior to actually realizing customer sales.

**Operating Command.** A term referring to any one of the USAF operating commands. For purposes of this instruction, they include Air Combat Command, Air Education and Training Command, AFMC, USAFR, Air Force Special Operations Command, Air Force Space Command, Air Mobility Command, ANG, Pacific Air Forces, and United States Air Forces in Europe.

**Planning, Programming, and Budgeting System.** The DoD resources management system controlled by Secretary of Defense (SECDEF) and used to establish, maintain, and revise the Future Years Defense Plan (FYDP) and the DoD portion of the President's Budget. Sometimes referred to as the biennial PPBS.

**Process.** A planned series of actions or operations which advances a material or procedure from one stage of completion to another.

**Program Objective Memorandum.** Each service submits the POM to the SECDEF biannually. It proposes military department and defense agency total program requirements for the next 6 years and includes rationale for planned changes from the approved FYDP baseline within the fiscal guidance.

**Programmed Depot Maintenance.** Includes inspection and maintenance requiring skills, equipment or facilities not normally possessed by operating locations.

**Reliability.** A fundamental characteristic of an item of material expressed as the probability that it will perform its intended function for a specified period of time under stated conditions.

**Reparable.** Items which will be repaired for reuse when they become unserviceable.

**Reparable Support Division.** The division in DBOF responsible for the management of assets with Expendability, Recoverability, Repairability Code (ERRC) Designator XD1 or XD2. These assets also are referred to as LRUs and SRUs. They are further identified as Budget Code 8 and Fund Code 64.

**Single Manager.** A manager responsible for integrating two formerly separate concerns (systems acquisition and sustainment) into a cohesive logistics support function. The scope of the single manager's responsibility begins in developing a weapon system to meet a specified need and continues through a

complete life cycle of the weapon system until its retirement. During this period, a series of activities occur, many at the same time. The single manager establishes the partnership between acquisition and sustainment inherent in the Integrated Weapon System Management concept. By definition, AFMC system program directors, product group managers, and material group managers are classified as single managers.

**System Support Division.** The DBOF division responsible for the management of assets with ERRC Designator XB3 or XF3. These assets also are referred to as SRUs. They are further identified as Budget Code 1 and Fund Code 6H. They are consumable items with limited repair (XF3).

**Unserviceable.** An item in a condition unfit for use but which can be restored to a serviceable condition after repair, rework, or overhaul. This condition includes items requiring calibration, test, modification, assembly, or the addition of components.